**Beware those pesky statistics**

A little time ago, I wrote to the Chairman of the Board of Governors at Antrim Grammar, about a seeming discrepancy in its A level results.

I wrote:

For the attention of the Chairman of the Board of Governors  
  
  
I wonder if you can help me with a query about your exam results?  
  
  
Your press release of 18 August 2016  declared that you had achieved an 80% success rate re three or more A\*-C grades in A level in 2016.  
  
The Department’s figure is 76.1%  
  
Is there an explanation for this discrepancy?

The reply came from Mrs Woods, then Principal of the school. She said :

I have been in discussion with Mr McCune, Chairman of the Board of Governors and he has authorised for me to respond to your query on his behalf.  
  
The August 2016 press release that you refer to was based on the percentage of those pupils who achieved 3 or more A\* - C from those who were entered for 3 or 4 A levels.  As stated in the my press release of August:  
Principal, Mrs Hilary Woods, said "Once again we are delighted with the achievements of our pupils and there have been some exceptional results. 80% of those pupils who sat three or more A levels achieved at least 3 grades A\* - C and are now progressing to their chosen university courses. 20% of the cohort achieved at least 3 A grades.  Ben Collister achieved an outstanding 4 A\* grades, Meriam Benchikh-Rodriguez, Victoria Clingen, Matthew Dobson and Kristen Sinclair achieved 3 A\* grades and Kyle Hill achieved 2 A\* and 2 A grades.  There was a significant increase in the number of top grades awarded with 76.3\* of grades A\* - B."  
  
For pastoral reasons (sickness, mental health issues, family disharmony), a number of pupils did not complete all 3 A level programmes of study.  The pupils often did 2 A levels and then an EPQ qualification (extended portfolio that is worth 70 UCAS points) or an additional AS qualification.  However, DE only recognise 3 full A levels or their equivalent (e.g. a BTEC Level 3 qualification) when compiling their statistics.  The figure that DE quote is based on all pupils in our Upper Sixth year group.

I asked a supplementary question:

Thank you for your prompt response.  
Am I right in assuming therefore that if all those other pupils , who did not sit three A levels are factored in  and [and those who did sit three or more A levels but who did not achieve A\*-C], the resultant figure would be that as published by the department, 76.1%?  
Equally does the figure of 100% pass rate refer only to the ‘elite group’ and not to the sixth form as a whole?  
  
And finally, are all your figures precise or have they been rounded up or down to the nearest whole figure i.e. 20% 55% 80% and 100%?

The answer was :

The figure published by DE is correct 76.1%.  
  
All pupils passed their A levels - there were no U grades, therefore it was 100% pass rate.  
  
The figures that the school uses in house are usually rounded up or down as required.  The figures that DE use are accurate.  
  
May I ask what is your connection with the school or why do you wish to have this information?

Recently , the Education and Training Inspectorate said this about statistics:

2.5 In 2015-16, around 10% of the pupils not included in the returns were deemed by schools to be ineligible for inclusion due to: having serious illness (including mental health issues); pregnancy; or a serious welfare issue. While the DE guidance for use of these ineligibility criteria by schools states specifically that these pupils must have been unable to sit one or more examinations, there was evidence that a significant proportion of them did sit public examinations. For example, there were instances where pupils deemed as ineligible sat as many as eight examinations at GCSE level or equivalent, resulting in inconsistencies across schools in the use of this criterion. Clearly, in these schools the exclusion of the pupils from the schools’ data improves the headline outcomes attained by the school in public examinations, and consequently in media-published league tables.

So it would seem that there are three figures that might be published by a school.

1. A Department of Education figure which is false, because the school excluded from the calculation children who were deemed [wrongly] by the school ineligible for inclusion.
2. A figure which is published by the Department of Education and which is correct because the school, like Antrim Grammar, gave the Department [correctly] a ‘warts and all’ figure.
3. A statistic which is misleading, like Antrim Grammar’s because it does what the Department asks be not done, it excludes the underachievers and achieves the result that the Department forbids.

None of the above tackles three other major problems about league tables, which the media publish in an annual frenzy of misinformation.

1. The statistics do not provide information on the type or quality of subjects sat.
2. There is no weighting given to the mark achieved. A school could achieve a high place , having all its pupils achieve a grade C. No distinction is made between grades achieved.
3. There is no way to evaluate the impact that sport, music, drama, clubs , societies and the particular ethos of a school has on its pupils.

No doubt most parents are sensible about these matters and are cautious about anything they might read or hear in the media. I am sure many form a view about a school from visiting it and listening to “the tongue of good report” or otherwise.

The massaging of statistics, either deliberately or inadvertently is hardly in the best interests of pupils.